

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 2004OC-708KR	<b>FOR FURTHER ACTION</b> see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. <b>PCT/KR2004/000930</b>	International filing date ( <i>day/month/year</i> ) <b>22 APRIL 2004 (22.04.2004)</b>	(Earliest) Priority Date ( <i>day/month/year</i> ) <b>23 APRIL 2003 (23.04.2003)</b>
Applicant  <b>HALLA CLIMATE CONTROL CORPORATION et al</b>		

This International search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 5 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☒ Certain claims were found unsearchable (See Box No. II)

3. ☐ Unity of invention is lacking (See Box No. III)

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

- a. the figure of the drawings to be published with the abstract is Figure No. 1

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

- b. ☐ none of the figure is to be published with the abstract.

# INTERNATIONAL SEARCH REPORT

international application No.

PCT/KR2004/000930

**Box No. II    Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

**This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:**

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 1 to 6, 8 to 11  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:  
  
The present invention is to provide a motor compressor, wherein a part of the refrigerant which is to be flowed into a swash plate chamber passes through a motor chamber, so that the cooling efficiency of an motor is improved and at the same time the lubrication of an operation part located in the chamber can be smoothly performed. (Continued on Supplemental Sheet.)
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)**

**This International Searching Authority found multiple inventions in this international application, as follows:**

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/KR2004/000930

**A. CLASSIFICATION OF SUBJECT MATTER****IPC7 F04B 39/06**

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC F04D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 1116883 A2 (Kabushiki kaisha Toyoda Jidoshokki Seisakusho) 18 July 2001 Claims 1-5; Figs. 7-8; paragraphs [0053]-[0058]	7
A	JP 2001-200785 A (Kabushiki kaisha Toyoda Jidoshokki Seisakusho) 27 July 2001 Claims 4-5; Fig. 1; paragraphs [0017]-[0038]	7
A	JP 2001-193638 A (Kabushiki kaisha Toyoda Jidoshokki Seisakusho) 17 July 2001 Claim 6; Figs. 1-2; paragraphs [0017]-[0040]	7
A	JP 56-47687 A (Hitachi Ltd.) 30 April 1981 Claims 1-2; Fig. 1; pages 444-446	7

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&amp;" document member of the same patent family

Date of the actual completion of the international search

28 JULY 2004 (28.07.2004)

Date of mailing of the international search report

28 JULY 2004 (28.07.2004)

Name and mailing address of the ISA/KR



Korean Intellectual Property Office  
920 Dunsan-dong, Seo-gu, Daejeon 302-701,  
Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

PARK, Jong Joo

Telephone No. 82-42-481-5961



# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/KR2004/000930

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 1116883 A2	18.7.2001	DE 1116883 R2	18.07.2001
		US 6565329 BB	20.05.2003
		US 2001007635 AA	12.07.2001
		EP 1116883 A3	23.10.2002
		FR 1116883 R2	18.07.2001
		IT 1116883 R2	18.07.2001
		JP 2001193639 A2	17.07.2001
JP 2001-200785 A	27.7.2001	US 2001014289 AA	16.08.2001
		DE 10101975 C2	09.10.2003
		DE 10101975 A1	08.11.2001
		JP 2001193639 A2	27.07.2001
JP 2001-193638 A	17.7.2001	US 6632074 BB	14.10.2003
		US 2003059316 AA	27.03.2003
		WO 200151809 A1	19.07.2001
		DE 10190281 T	02.05.2002
		JP 2001193639 A2	27.07.2001
JP 56-47687 A	30.4.1981	NONE	

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/KR2004/000930

Box No. II (2)

However, claim 1 lacks a component, that is, a connection path which is needed for the refrigerant taken into a motor chamber to be taken into bores of a cylinder block after being cooled, which causes the refrigerant taken into the motor chamber not to be circulated. Consequently, claim 1 lacks a component essential to the invention, and consequently is unclear. Therefore, the International Searching Authority cannot perform an effective search regarding said claim 1.

The International Searching Authority cannot perform an effective search regarding claims 2-6 and 8-11 for the same reason as stated above regarding claim 1, either.